

which is enclosed in outline to indicate that the new Figure 1 in its entirety is to be considered as a replacement for the original Figure 1.

As the Examiner will note, in the new Figure 1, the insulation thicknesses 14 are identified in chain-dotted outline and these insulation thicknesses effectively separate the two conductors of the pair. The web-like item 18 has been eliminated from Figure 1. Initially this item 18 was intended to show the spacing between the conductor pairs but undoubtedly it has led to confusion. Instead of this the arrow 16 between the pairs is intended to indicate the spacing between them and this is now consistent with the original description in the application. Another problem may have been caused by the use of the term "loop surface area" which was introduced in line 32 on page 1. This was intended to refer to the spacing between the conductors of the pair which generates an area between the conductors over the entire length of the pair. However, it is felt that the terminology is itself misleading and taken together with the reference 18 used originally in Figure 1 it certainly did not appear to explain the situation correctly. As a result, the term "loop surface area" is now replaced with "physical spacing area" which is defined as the distance between the conductors taken along the length of the conductors of a pair. This reference is now being used throughout the specification in explanation.

From the above explanation and new Figure 1, it should now be apparent that the present invention and the described embodiment have no relationship to French patent, Figure 2 which shows a web of insulation between conductors. No such web exists in either the present invention or in the embodiment.

With regard to objection 4 in the Official Action, the Examiner is thanked for noting

A

the discrepancy between page 6 lines 20 to 23 and page 5 lines 18 to 22. To correct this situation, the word "increases" has been replaced with "decreases" on line 23 on page 6. It is also noticed that in line 22 on page 5 the reference to lower attenuation is also incorrect. This has now been changed to an increase in attenuation in keeping with the wording of the rest of the sentence.

Other amendments and additions have been added to the description in various places. It should be stressed that none of these additions is by way of adding additional subject matter to the application, but is intended to add to the explanation concerning the theory involved. Of particular interest are the changes on page 5 which is concerned with a conventional twisted pair. Amendments between lines 18 and 28 have been made to render the discussion more readable. The additional sentence at the end of the paragraph on line 27 is merely a further discussion on how impedance is affected by the length of twist lay in the conventional pair. The changes to page 6 and also between lines 8 and 10 on page 9 were also made to explain the situation more clearly than was in the original specification. An amendment has been made on page 8 lines 15 and 16 and also in the Table. This is because the units referred to originally were wrongly represented. These have now been corrected to refer to MHz.

In the claims, the Examiner's comments have been noted regarding the rejected and allowable claims if written in independent form. Accordingly, claims 1, 3 and 4 are cancelled and a new claim 8 is submitted herewith. This new claim 8 is based upon the subject matter of claim 3 which the Examiner has deemed allowable. The remaining original claims have been amended with regard to appendancy and also with claim 5 the wording has been changed to render it consistent with the

wording of new claim 8. It is believed in view of these amendments that the claims now on file should be deemed to be allowable.

The Applicants respectfully request the Examiner to reexamine this application and would be pleased to receive an early allowance. The Examiner is thanked for his efforts spent on the application addressing certain problems.

Yours very truly,
J-H. Walling, et al

By *R.J. Austin*
R.J. Austin,
Patent Agent
Registration No. 29,496

RJA:go'd

c/o NORTHERN TELECOM LIMITED,
Patent Department,
P.O. Box 3511, Station C
Ottawa, Ontario, Canada, K1Y 4H7

Phone: (613) 721-3016

Date: December 1, 1994

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below.

R.J. Austin
R.J. Austin, Patent Agent
Registration No. 29,496

Date: December 1, 1994